IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1(Original). A receiver system comprising:

a channel estimator component operative to process a data signal to form a current channel impulse response and a channel estimate;

an offset phasor determiner that determines an offset phasor as a function of the current channel impulse response and a previous channel impulse response; and

a phase offset corrector that corrects the current channel impulse response by the offset phasor and provides a phase corrected channel impulse response to the channel estimator, such that the channel estimator determines a corrected channel estimate.

2(Original). The system of claim 1, the offset phasor determiner operative to store the previous channel impulse response and update the previous channel impulse response with the phase corrected channel impulse response.

3(Original). The system of claim 2, the offset phasor determiner operative to determine an offset vector as a product of the previous channel impulse response and the complex conjugate of the current channel impulse response.

4(Original). The system of claim 3, the offset phasor being computed by iteratively rotating a pair of vectors in opposite directions.

5(Original). The system of claim 3, the offset phasor having a first component being the cosine of the phase offset and a second component being the sine of the phase offset.

6(Original). The system of claim 1, the channel estimate being at least partly formed from the phase corrected channel impulse response.

7(Original). The system of claim 1, the channel estimator determines an average channel impulse response.

8(Currently Amended). A signal processing system for use in a receiver, the system comprising:

a channel estimator that receives a digital signal and produces a current channel impulse response, an average channel impulse response and a channel estimate;

an offset phasor determiner that determines an offset phasor, the offset phasor being at least partly a function of the current channel impulse response; and

a phase offset corrector that corrects the current channel impulse response by the phase offset using the offset phasor and provides a phase corrected channel impulse response<u>, wherein the offset phasor being at least partly a function of one or more of the average channel impulse response and a previous channel impulse response</u>.

9. Canceled.

10. Canceled.

11(Original). The system of claim 10, the offset phasor determiner storing the previous channel impulse response.

12(Original). A system for correcting a current channel impulse response, the system comprising:

an IFFT function that receives a digital signal and produces a current channel impulse response;

an offset phasor determiner that provides an offset vector that is a function of the current channel impulse response and a previous channel impulse response, the offset phasor determiner iteratively computes the sine and cosine of the phase offset from the offset vector;

a phase offset corrector that forms a phase corrected channel impulse response from the current channel impulse response and the offset phasor; and

a FFT component, to transform the phase corrected channel impulse response into a portion of a channel estimate.

13(Original). The system of claim 12, the offset vector formed as a product of the previous channel impulse response and the complex conjugate of the current channel impulse response.

14(Original). The system of claim 13, the sine and cosine of the phase offset iteratively computed using a first vector and a second vector.

15(Original). A system for determining a phase corrected channel impulse response, the system comprising:

a comparator that computes an offset vector as a function of a current channel impulse response and a second channel impulse response, the offset vector representing a phase offset of the current channel impulse response with respect to the second channel impulse response;

a vector analyzer that computes an offset phasor as a function of the offset vector, the offset phasor having an imaginary component corresponding to the sine of the phase offset and a real component corresponding to the cosine of the phase offset; and

a phase offset corrector that computes a corrected channel impulse response using the offset phasor.

16(Original). The system of claim 15, the second channel impulse response being one of an average channel impulse response and a previous channel impulse response.

17(Original). The system of claim 15, the comparator computing the offset vector as a product of the second channel impulse response and a complex conjugate of the current channel impulse response.

18(Original). The system of claim 15, the offset phasor being computed without computing the angle of the offset vector.

19(Original). The system of claim 15, the phase offset corrector correcting the current channel impulse response by the phase offset using the offset phasor.

20. Canceled.

21. Canceled.

22(Original). A method for determining an offset phasor comprising:

providing a first channel impulse response and a second channel impulse response;

forming an offset vector as a function of the first channel impulse response and the second channel impulse response, the offset vector have a x coordinate and a y coordinate;

initializing a first vector having a x component and a y component with a constant value for the x component and with a zero value for the y component;

initializing a second vector having a x component and a y component with the x and y coordinates of the offset vector, respectively;

incrementally rotating the first vector until the y component of the second vector is about zero;

concurrent to rotating the first vector, incrementally rotating the second vector in an opposite direction of the first vector until the y component of the second vector is about zero; and

providing an offset phasor being final components of a last iteration of the first vector, the x component being the cosine of the angle formed by the offset vector and the y component being the sine of the angle formed by the offset vector.

23(Original). The method of claim 22, the providing the first channel impulse response comprises providing a current channel impulse response.

24(Original). The method of claim 22, the providing the second channel impulse response comprises providing one of a previous channel impulse response and an average channel impulse response.

25(Original). The method of claim 22, the incrementally rotating the first and the second vector comprise incremental rotations capable of being performed by a shift operation.

26(Original). A method for correcting a channel estimate comprising:

receiving a data burst;

performing an IFFT on the data bursts to obtain a channel impulse response;

comparing the current channel impulse response to a previous channel impulse response to determine an offset vector;

computing an offset phasor from the offset vector, wherein the offset phasor is computed by;

initializing a first vector having a x component and a y component with a constant value for the x component and a zero value for the y component;

initializing a second vector having a x component and a y component with the x and y coordinates of the offset vector, respectively;

concurrently incrementally rotating the first and second vectors in opposite directions until the y component of the second vector is about zero; and

providing an offset phasor being final components of a last iteration of the first vector;

correcting the current channel impulse response using the offset phasor to form a phase corrected channel impulse response; and

forming a channel estimate from the phase corrected channel impulse response.

27(Original). The method of claim 26, the forming the channel estimate comprising performing an interpolation using the phase corrected channel impulse response.

28(Original). The method of claim 26, the computing the offset phasor comprising iteratively computing the offset phasor without performing a trigonometric calculation.

29(Original). The method of claim 26, the computing the offset phasor comprising iteratively computing the offset phasor without use of a start angle.